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ABSTRACT

This report examines the performance of the Worcester Public Schools, Massachusetts, highlighting the areas in which Worcester is succeeding and where it needs improvement. Indicators presented in the report were developed in collaboration with representatives of a wide variety of organizations, as well as public officials. The report provides some comparisons to similar school districts in Massachusetts, including Springfield, Lowell, and Fall River. Although the report presents aggregate district-level data, a data appendix with individual data for individual schools in Worcester is available at the end of the report. The report begins by describing what performance measures are and how they should be used. Next it focuses on the six indicators: attendance and dropout rates; student mobility; family involvement; post-graduate placement; local employer satisfaction; and Massachusetts Comprehensive Assessment System (MCAS) scores. For each indicator, the report discusses why it is important, how Worcester performs, and what it means for Worcester. After offering detailed district profiles for the four cities, a data appendix presents detailed charts on each of the six indicators. (SM)

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Center for
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Benchmarking Public Education in Worcester

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Dear Citizen,

We are pleased to publish this second report in a series from the Center for Community Performance Measurement (CCPM). The CCPM was established at the Worcester Regional Research Bureau in January, 2001, with generous support from the Alfred P. Sloan Foundation, to measure and benchmark municipal and community performance in Worcester in the areas of economic development, municipal and neighborhood services, public education, public safety, and youth services. This report focuses on the performance of the Worcester Public Schools.

It is our hope that these reports will highlight the areas in which Worcester is succeeding and where it is in need of improvement. The indicators presented here were developed in collaboration with representatives of a wide variety of organizations, as well as public officials, to ensure their relevance to Worcester. These indicators will serve as a benchmark against which our future performance can be measured. This report on public education also includes some comparisons to similar school districts in Massachusetts, including Springfield, Lowell and Fall River. A general profile of these comparison districts and the criteria used to select them are presented at the end of the report. Although the report presents aggregate district-level data, a Data Appendix with additional data for individual schools in Worcester is available at the end of the report.

This report, as well as those in the rest of the series, has been designed to be readable by a broad audience so as to encourage widespread discussion about the future of our community and about how performance measures can serve as a basis for making sound public policy. Next year, when we re-release this report with updated information, the community will be able to ask, "What has changed, what have we accomplished, and what challenges are still before us?"

Although each report in the series is published separately, they should not be considered in isolation from one another. For example, there is a substantial relationship between student academic achievement in our public schools and the kind of workforce needed to enhance economic development opportunities. Similarly, efficient and effective municipal services are important to enhancing Worcester's attractiveness for locating a business. Hence, individual reports should be seen in light of the whole series.

Indicators appearing in this report are also interrelated. Academic achievement cannot be measured by only one or two of these indicators. Students must consistently attend school (Indicator 1: Attendance and Dropout Rates) and have appropriate family involvement (Indicator 3: Level of Family Involvement) in order to learn critical skills in the various subjects of the MCAS (Indicator 6: MCAS scores) or to perform well in the labor market (Indicator 5: Local Employer Satisfaction).

Thank you for taking the time to read this important report. We look forward to hearing your comments and suggestions on the project.

Sincerely,

Mark Colborn - *President* **Roberta R. Schaefer, Ph.D.** - *Executive Director* **Richard H. Beaman** - *Manager, CCPM*

What are Performance Measures?

Performance measurement has been defined as "measurement on a regular basis of the results (outcomes) and efficiency of services or programs."[1] Thus performance measures are quantifiable indicators that, when analyzed, determine what a particular program or service is achieving.

Performance measures come in many different forms, including inputs (such as financial resources), outputs (the number of customers served), and outcomes (the quantifiable results of the program). Regardless of their form, performance measures should relate to a particular initiative or strategy of an organization. The measures presented in this report are directly associated with the goals of the Massachusetts Education Reform Act of 1993. The act initiated major changes to the public education system in the Commonwealth, including a large infusion of additional funds (more than $7 billion statewide since FY94) to ensure an adequate per-pupil expenditure across all districts (Worcester received $46.3 million in Chapter 70 aid in FY93 and $147.8 million in FY02 – an increase of 219.2%), the implementation of statewide standards, and accountability for student performance through the Massachusetts Comprehensive Assessment System (MCAS). The Worcester Public Schools have actively embraced this reform package, and its FY02 budget introduction includes the goals of improving test scores, lowering pupil-teacher ratios, increasing student attendance, decreasing dropout rates, increasing the number of students enrolled in Advanced Placement courses, and increasing the number of graduates entering post-secondary education immediately after high school.

[1] Harry Hatry *Performance Measurement: Getting Results* (Washington, D.C.: Urban Institute Press, 1999), 3.

How should these measures be used?

The performance measurement data in this report do not explain why a particular measure improved or declined. For this reason, the data must be used in conjunction with other information to develop sound public policies. For example, this report presents the attendance rates for the Worcester Public Schools. While attendance rates influence overall academic achievement, good teachers and a strong curriculum are equally important. Therefore, additional information to determine the success of the City's efforts could include teacher certification and professional development, and curriculum variations among schools.

It must be noted at the outset that the WPS is not the only entity that is responsible for improving the measures set forth in this report. Research, starting with the Coleman Report of 1966,[2] has shown that one of the strongest predictors of academic achievement is family background.[3] Children from more affluent families, regardless of family structure, are more likely to do better in school, and children from single-parent or divorced families, on average, perform below their peers. There are, however, many examples in the WPS and in other communities where educational programs within the schools seem to have mitigated the effects of the external environment on students.

As this discussion suggests, the data in this report do not explain why a given measure improved or declined. Therefore, it is not our purpose in this report to provide recommendations for action. Rather, we are presenting the data to stimulate discussion about options for improving Worcester's performance. It will be up to the teachers and administrators of the Worcester Public Schools, the Worcester School Committee, parents, businesses, and non-profit organizations to ensure that these data are used to promote action that will help Worcester's students perform better on these various indicators.

These data can also be used to set benchmarks, or reference points to which Worcester's performance can be compared. For example, one benchmark could be the performance of another school system on the same indicator. Alternatively, we can set our own performance goals and compare future achievement to our past performance. The Worcester community will have to determine how this information should be used in order to achieve the highest level of impact.

[2] James S. Coleman, et. al., *Equality of Educational Opportunities* (Washington, D.C.: National Center for Educational Statistics, 1966).

[3] For a collection of recent studies see Greg J. Duncan and Jeanne Brooks-Gunn, eds., *Consequences of Growing Up Poor* (New York: Russell Sage Foundation, 1997).

Benchmarking Public Education in Worcester

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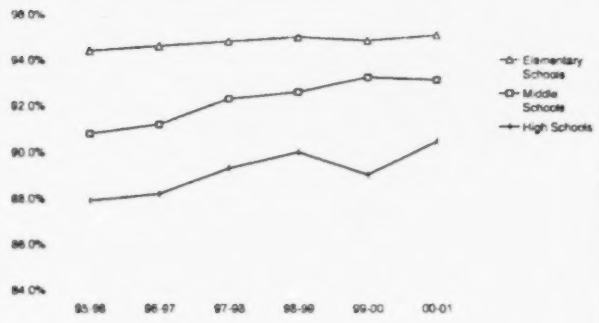
INDICATOR

1 Attendance and Dropout Rates

Why is it important?

While teacher effectiveness, quality of school buildings, and availability of textbooks and computers are all important elements that contribute to student academic achievement, students must attend classes and not drop out in order to benefit from teachers, facilities and technology. Studies have shown that students who drop out have lower lifetime earnings and less success in today's labor market.[1] One analysis of U.S. Department of Labor statistics showed that high school dropouts had a 6.7% unemployment rate compared to a 3.5% rate for high school graduates, and annual earnings for dropouts were approximately $10,000 less per year than for graduates.[2]

Chart 1-1: Average Attendance Rates, 1995-2001



Data Source: Worcester Public Schools

[1] P. Boudett, et. al., "'Second Chance' Strategies for Women Who Drop Out of School," *Monthly Labor Review* 123, no. 12 (2000): 19-31. Robert F. Kronick, "The Imperative of Dealing with Dropouts: Theory, Practice and Reform," *Education* 114, no. 4 (1994): 530-535.

[2] Tracy L. Schmidt, "Should I Stay or Should I Go?," *State Legislatures* 27, no. 6 (2001): 25-27.

[3] School-level data for this indicator and others in this report are provided in the Data Appendix.

[4] See the Appendix for information on how comparable districts were selected. All data on attendance and dropout rates are self-reported by districts to the Massachusetts Department of Education. The Department of Education does not audit or assure the reliability or validity of the reported data.

How does Worcester perform?

The average daily attendance rate for all public schools was 93.1% for the '00-'01 school year.[3] Since the '95-'96 school year, attendance rates at all levels have increased, as shown in **Chart 1-1**. High schools have seen the greatest improvements, from an average daily attendance rate in '95-'96 of 87.9% to 90.5% in '00-'01.

The most recent data available for comparable school districts are for the '98-'99 school year.[4] As shown in **Chart 1-2**, Worcester's attendance rate that year of 93.6% was slightly below Lowell's rate (93.9%), and above the rates in Springfield (93.4%) and Fall River (91.8%).

Dropout Rate

The dropout rate in the WPS for the '00-'01 school year was 6.2%, as shown in **Chart 1-3**. Between 1995 and 1998, there was a steady decline in the number of dropouts resulting in a 5.9% rate in '97-'98. In '98-'99, there was an increase in the rate to 7.3%, but it has since leveled off at around 6%. Two high schools have seen steady declines in their dropout rates over the last three years; Doherty High had a decline from 5.9% during '98-'99 to 4.8% in '00-'01 and South High had a decline from 8.5% in '98-'99 to 5.2% in '00-'01.

The most recent data available for comparable districts are for the '99-'00 school year. As shown in **Chart 1-4**, Worcester's dropout rate that year (6.1%) was about equal to that of Springfield (6.0%), and below those of Fall River (6.9%) and Lowell (11.6%). During that year, the statewide dropout rate was 3.5%.

These dropout rates are calculated based on the federal government's guidelines, which tend to inflate the rates for urban communities that have high mobility rates (see **Indicator 2: Student Mobility**). The Worcester Public Schools has asked the Department of Education to consider using what it regards as a more accurate calculation procedure by which the total number of dropouts is compared to the total student enrollment for the entire year. This alternate calculation results in a dropout rate in Worcester of 5.7% in '00-'01 rather than the reported rate of 6.2%.

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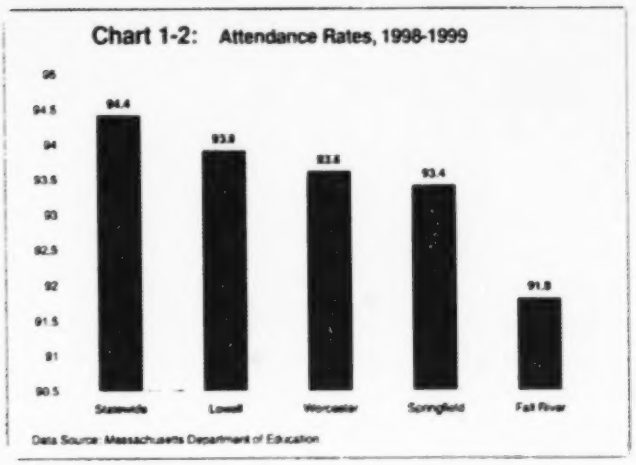

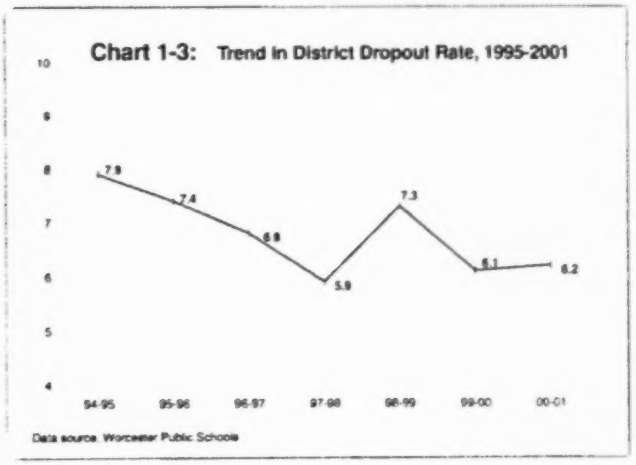

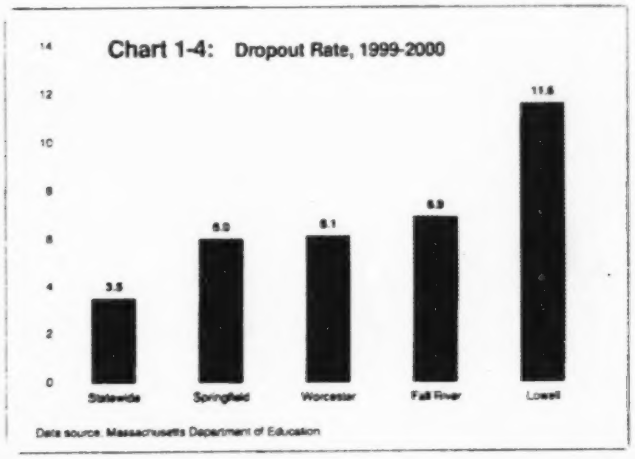

What does this mean for Worcester?

The attendance rates in Worcester's schools have been improving steadily over time. Unfortunately, dropout rates do not show a similar improvement. However, Doherty High and South High have seen decreases in their dropout rates each year for the last three years; these schools may have best-practices that could be considered for implementation in other schools. Retaining more students through graduation should improve students' future success and lifetime earnings.

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2 Student Mobility

Why is it important?

Student mobility, or the rate at which students move from one school to another, significantly affects academic performance. A student who starts the year at one school but moves to another school midway through the year will not have the consistency of one teacher or one curriculum model. Additionally, highly mobile students frequently perform below their peers on the Massachusetts Comprehensive Assessment System (MCAS), an important evaluation tool that measures academic achievement. High mobility rates can also bring down aggregate district achievement levels.[1] For example, writing about MCAS scores at the Gavin Middle School in South Boston, the *Boston Globe* reported, "...Grade 8 failure rates went up in English and only slightly down in math... One explanation: A significant number of eighth-graders entered Gavin that year lacking basic skills."[2]

[1] In Florida, the high mobility of migrant farm workers led to a policy of excluding students' scores on the Florida Comprehensive Assessment Test (FCAT) if they were not present in the state for the entire school year. In this way, schools are not held accountable for students who were not present in their schools to benefit from the education program. Massachusetts does not have such a policy.

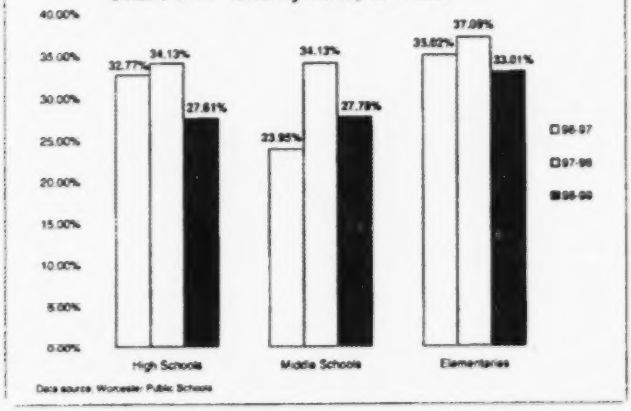
[2] Anand Vaishnav, "In Boston, Gains and Problems," *Boston Globe*, 2 November 2001, A33.

How does Worcester perform?

During the '98-'99 school year (the most recent year for which data are available) the Worcester Public Schools **had an average school mobility rate of 31%.** This means that 31% of students who began the year at one school transferred to another school at some point during the year. This level was a decline from 36% during the previous school year.

As indicated in **Chart 2-1**, elementary, middle and high schools all saw increases in their mobility rates from '96-'97 to '97-'98, and decreases from '97-'98 to '98-'99. Elementary schools had the highest mobility rates all three years (33% in '98-'99), while middle and high schools were approximately equal in '98-'99 at 28%.

Chart 2-1: Mobility Rates, 1997-1999



Data source: Worcester Public Schools

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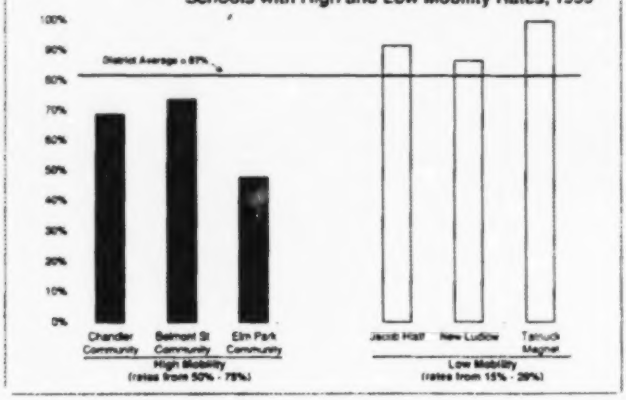
What does this mean for Worcester?

Individual schools have less influence over this indicator than other indicators presented in this report. However, the WPS has implemented several projects to mitigate the effects of mobility on student achievement. For example, a standardized curriculum ensures that students who move from one school to another school in the district benefit from the same academic material. As well, programs to increase the level of family involvement (see ***Indicator 3: Level of Family Involvement****) may help to reduce mobility rates as families become more involved and invested in one school. Differences in the availability of such programs may help explain the wide variation in mobility rates among Worcester schools. For example, the University Park Campus School, located in one of the most economically disadvantaged neighborhoods in the city, has an almost negligible mobility rate. Are there lessons that can be learned from such schools in retaining students?*

Regardless of the programs in place to mitigate the effects of mobility, high mobility rates do affect academic achievement in numerous ways. One major indicator of its effect can be seen in scores on the Massachusetts Comprehensive Assessment System (which is discussed more in depth in ***Indicator 6: MCAS Scores****). As shown in* ***Chart 2-2****, students from schools with the highest mobility rates (between 50% and 75%) in '98-'99 performed below the district average on the fourth grade English language arts MCAS exam in 1999. Those schools with the lowest mobility rates (between 15% and 20%) performed above the district average. (There are other factors that may contribute to both the high mobility rates and the low MCAS performance in these schools, such as socioeconomic status. It appears, however, that the effect of socioeconomic status can be mitigated in various ways, as seen at the University Park Campus School which has 76% of its students eligible for free and reduced-price lunch and has low mobility rates and high MCAS scores in the eighth grade.)*

Although the WPS have not calculated mobility rates since the '98-'99 school year, they intend to calculate it in the future because of its importance as a predictor of student achievement. The updated mobility data in future releases of this report will show whether the new programs implemented by the WPS have reduced these rates.

Chart 2-2: MCAS 4th Grade ELA Passing Rates for Schools with High and Low Mobility Rates, 1999



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3 Family Involvement

Why is it important?

When parents and families are involved in their children's education, the children will frequently perform better academically. Studies have shown that when parents attend school activities, communicate with their children's teachers and principal, and talk to their children about the day's activities, children internalize the message that their parents value education. As a result, children of parents who are involved in these activities feel more confident in school and are more likely to succeed academically.[1]

One study defined three types of parental involvement: behavioral, cognitive-intellectual, and personal.[2] Behavioral involvement includes participating in activities at school and creating an educational environment at home (such as helping with homework and asking about class activities). Cognitive-intellectual involvement includes such activities as taking children to a museum or library and asking them about current events. Personal involvement means that the parent is knowledgeable about school curriculum and expectations. While none of these types of involvement necessarily increases student skills, they can affect children's attitudes and motivations, both of which are important components of school success.

Temple University psychology professor Laurence Steinberg,[3] among others, has shown that such parent involvement is important at all grade levels, even though parent involvement in the United States tends to decrease as a child gets older.[4] In fact, Steinberg and John McWhorter,[5] author and University of California linguistics professor, have identified several characteristics of high school students that highlight the need for more parent involvement at that level, including the tendency to not take school seriously and to be influenced by peer pressure that disparages academic success. Parents and families have the opportunity to counteract this pressure by demonstrating to their children the importance and value of academic success. Additionally, Steinberg notes that older students typically spend less time than younger students outside the classroom engaged in activities that reinforce classroom learning. As noted above, parents can reinforce classroom learning through both behavioral and cognitive-intellectual involvement.

[1] W. S. Grolnick and M. L. Slowiaczek, "Parents' involvement in children's schooling: A multidimensional conceptualization and motivational model," *Child Development* 64 (1994), 237-252.

[2] ibid.

[3] Laurence Steinberg, Beyond the Classroom: *Why School Reform Failed and What Parents Need To Do* (New York: Simon & Schuster, 1996).

How does Worcester perform?

To measure Worcester's performance, indicators were developed that coincide with the behavioral type of parent involvement. The number of parents participating in parent-teacher conferences was recorded by individual schools, and surveys were conducted with principals and teachers asking a series of questions about their level of information-sharing and communication with parents and families.[6] These surveys also asked principals and teachers how much they encouraged personal involvement. (Other measures of personal and cognitive-intellectual involvement could not be supplied because parents were not directly surveyed.)

One form of behavioral involvement is attending parent-teacher conferences. A survey of teachers was conducted by the Worcester Public Schools in 1996 to determine the number of conferences they conducted with parents, what type of conferences were used, and what obstacles prevented conferences with other parents. The survey was repeated in 2001 and will be repeated in each of the upcoming school years. In 1996, teachers reported that they successfully held 89.6% of the conferences that they needed to conduct. In 2001, this figure had increased slightly to 91.6% of conferences.

The activities of principals and teachers influence the amount of parent involvement in their schools. According to Professor Wendy Grolnick of Clark University, who has studied parent involvement, "The strength of the connections between families and schools may...be a function of characteristics of the school institution and its representatives. Teachers are parents' primary contacts within the school, and thus practices in the classroom are potential influences on parent involvement."[7] Teachers and principals can influence the personal dimension of involvement

[4] According to Steinberg, the drop-off in involvement does not occur in many Asian countries; if anything, in Asian countries parents become more involved in their children's education as they get older.

[5] John McWhorter, *Losing the Race: Self-Sabotage in Black America* (New York: Free Press, 2000).

[6] The teacher and principal surveys were adapted from surveys designed by Wendy Grolnick of Clark University. Dr. Grolnick helped in the adaptation of the surveys. Surveys were administered by the Worcester Public Schools and analysis was done by the Worcester Regional Research Bureau.

[7] Wendy S. Grolnick, et. al., "Predictors of Parent Involvement in Children's Schooling," *Journal of Educational Psychology* 89, no. 3 (1997), 538.

by providing regular information to parents about activities in their child's classroom. Additionally, teachers and principals can influence the behavioral component of involvement by asking families to participate in a variety of activities, such as asking their children what they did in school. Surveys of teachers (middle and high school) and principals (all levels) were conducted by the Research Bureau and the WPS in June, 2001, to collect baseline data about what activities they engage in to encourage family involvement. The surveys will be repeated in future years, and will include elementary school teachers. (The full survey results are available in the Data Appendix.)

As can be seen in **Table 3-1**, teachers and principals report interacting with parents and families in a variety of ways, such as using them as volunteers, asking families to talk to their children about what they did in the classroom, and asking families to check daily that their child's homework is done. The type of interaction that is most beneficial for academic achievement varies with the age of the students. For example, in elementary schools it may be more important for teachers to encourage families to take their child to the library and to check that their child's homework is done each day. In middle school, teachers might ask families to discuss assignments and test results. At the high school level, perhaps parents should be encouraged to attend school activities, such as sporting events and musical performances.

Table 3-1: Selected Survey Results

	Middle Schools	High Schools
Percent with at least one parent volunteer per week, on average:	9.1%	11.5%
Percent who send out a request for volunteers three or more times per year:	16.8%	17.4%
Percent who ask a majority of families to talk to their children about what they did in the classroom:	23.3%	11.5%
Percent who ask a majority of families to check daily that their child's homework is done:	31%	13.3%
Percent who "sometimes" involve families in volunteering:	60%	40%
Percent who spend more than seven hours each week in contact with parents:	0%	50%
Percent who provide a newsletter to parents more than five times per year:	60%	100%

What does this mean for Worcester?

There is little disagreement that parental involvement has the potential to improve students' academic achievement. Worcester's teachers confirm this finding: 97% of teachers responded that they think parent-teacher conferences improve students' academic and/or social performance. Therefore, teachers and principals need to continue their efforts to reach out to parents and help them become involved in their children's education.

It is difficult, however, to draw conclusions about the level of family involvement in the Worcester Public Schools from the data in this report. For example, we cannot determine how many children had a parent attend at least one activity at their child's school. Similarly, although we asked teachers whether they encourage parents to check that their child's homework is done each day, we have no information on the number of parents who actually engage in this behavior.

In recognition of these limitations, it is our intention that future releases of this report will include additional research to be conducted over the next year. Our plan is for this research to be based on the conclusions of Laurence Steinberg's work that demonstrates that the most beneficial type of involvement varies based on the age of the child. At the elementary level, surveys should be administered to parents to determine their activities in checking over homework, encouraging children to do better, and overseeing the child's academic progress from home. The activities that parents engage in are thus the potential outcome of teacher and principal efforts to encourage this type of involvement. At the middle and high school level, surveys of parents could determine how many attend extracurricular activities, teachers conferences, and "Know Your School" nights. Surveys could also be conducted with students to determine how frequently their parents are involved in their academic lives in various ways.*

*The WPS currently collect information about the total number of people attending "Know Your School" nights. This information, however, does not determine what percentage of children had at least one family member attend the night. Therefore, no conclusions on this subject can be reached.

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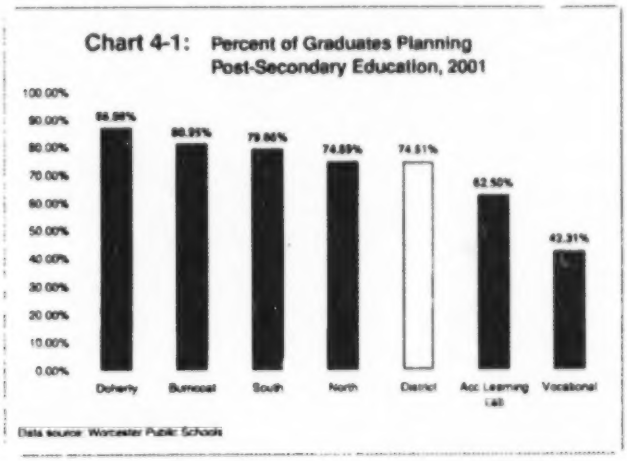
4 Post-Graduate Placement

Why is it important?

The fields of employment that are currently expected to have the highest growth rates (including information technology, biotechnology, and various health professions) frequently require advanced training for entry-level positions. Many studies have shown that post-secondary education is also important for higher future earnings and greater flexibility in the workforce.[1] One such study analyzed data from the Bureau of Labor Statistics and found that between 1979 and 1990, women with a 4-year college degree experienced a 104% increase in earnings (after adjusting for inflation), while women with only a high school education saw a 74% increase.[2] Similarly, men with 4-year degrees saw an earnings increase of 77%, while men with only a high school education saw increases of just 46%. One study estimated that a person with a 4-year college degree earns almost twice as much per year as someone with only a high school education.[3]

In order to help graduates compete for these higher paying jobs, the WPS has established a goal of ensuring that 80% of its high school graduates enter some form of post-secondary training immediately following high school graduation.



[1] Daniel E. Hecker, "Reconciling Conflicting Data on Jobs for College Graduates," *Monthly Labor Review* 115, no. 7 (1992), 3-13. Jerry Gray & Richard Chapman, "Conflicting Signals: The Labor Market for College-Educated Workers," Journal of Economic Issues 33, no. 3 (1999), 661. Gerald Friedman, "Book Review: What Employers Want: Job Prospects for Less-Educated Workers," Labor History 42, n.1, 97.

[2] Daniel E. Hecker, p.13.

[3] Jeremy Kahn, "Is Harvard Worth It?," *Fortune* 141, no. 9 (2000), 200.

How does Worcester perform?

Graduating students are asked by the public schools about their plans after graduation. **Among all graduates of the Class of 2001, 74.5% planned to attend some form of post-secondary education** (see **Chart 4-1**), 5.5 percentage points below the WPS goal. Doherty High School had the highest rate of post-secondary plans at 86.9%, while the Vocational High School had the lowest rate at 42.3%.

Although in the past relatively few Vocational High graduates have pursued post-secondary education, from 2000 to 2001 there was a dramatic increase in the number of students planning to enter a 2-year college, as shown in **Chart 4-2**. Overall, in 2001 just under 40% of all Vocational students planned to enter either a 2-year or 4-year post-secondary institution. In addition, just under 3% of vocational students planned some other form of post-secondary education, increasing the percentage to just under 43% of students planning some form of post-secondary education.

Compared to other urban districts, as shown in **Chart 4-3**, the percent of Worcester students planning to attend 2-year college in 1999 (the year for which the most recent data are available for the comparable cities) was approximately the same as the percentages in Lowell, Fall River and Springfield.[4] For those planning to attend 4-year colleges, however, the percentage of students in Worcester (45%) was lower than in Lowell (54%) and higher than in Fall River (32%) and Springfield (33%). Overall, Lowell had the highest percentage of students planning post-secondary education (87%), 11 points higher than Worcester's rate of 76%.

[4] Data on post-secondary placements are self-reported to the Massachusetts Department of Education and are not audited by the state.

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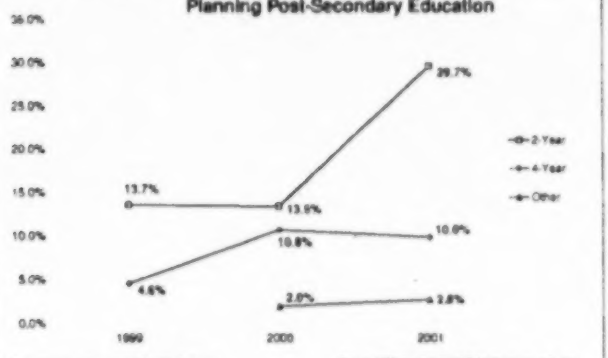
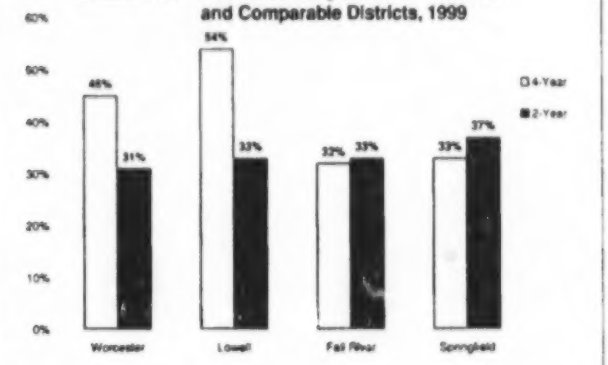
Chart 4-2: Trend in Percent of Vocational Students Planning Post-Secondary Education



Data source: Worcester Public Schools

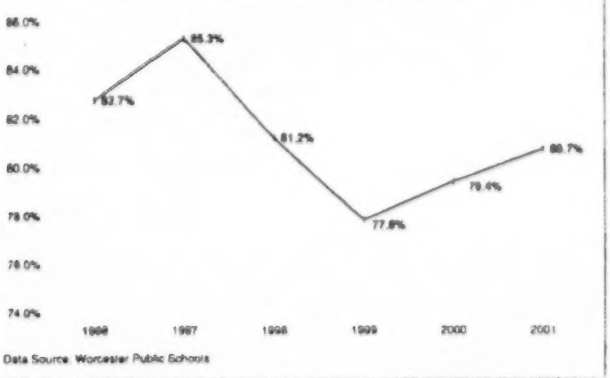
Prior to 1998, the Vocational School was not under the jurisdiction of the Worcester Public Schools

Chart 4-3: Post-Secondary Plans for Worcester and Comparable Districts, 1999



Data Source: Massachusetts Department of Education

Chart 4-4: Trends in the Percent of Students Planning Post-Secondary Education, Excluding the Vocational School



Data Source: Worcester Public Schools

What does this mean for Worcester?

Not including the Vocational School, 80.1% of graduates planned some form of post-secondary education in 2001, meeting the district goal set by the WPS. Among the various schools, however, only Doherty High and Burncoat High were above the 80% goal. South High, North High, and the Accelerated Learning Lab all had fewer than 80% of graduates planning some form of post-secondary education.

The 2001 level of 80.1% was the result of a gradual increase in the percent of non-Vocational students planning post-secondary education since 1999, as shown in **Chart 4-4**. *Prior to this, there was a significant decline in the percent of students seeking a post-secondary education, from 82.7% in 1996 to 77.8% in 1999. Next year's release of this report will determine whether the improvement trend continues.*

Future releases of this report will also determine whether the percentage of students from the Vocational School planning some form of post-secondary education continues to increase, as it did from 2000 to 2001. Whereas in the past, the Vocational High School primarily prepared students for success in employment, the School may now need to consider how to prepare students to meet the challenges of further education and a labor market that requires more advanced skills for higher paying jobs.

The data presented here indicate the number of students planning to attend some form of post-secondary education. Unfortunately no information is available regarding the number of students who actually enroll or who remain in a post-secondary placement and receive a degree. Although these additional data are difficult to collect, it would provide important information that would allow a more complete assessment of the Worcester Public Schools' success in preparing students to enter post-secondary education.

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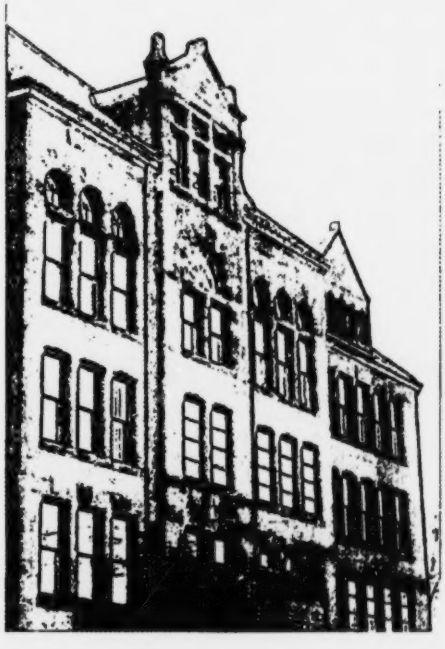
5 Local Employer Satisfaction

Why is it important?

Worcester's public high schools are an important tool for workforce development. Graduates from WPS high schools must be adequately trained in the skills needed for success in today's workforce, including strong math and reading skills and a strong work ethic and interpersonal skills.



How does Worcester perform?

In late 2001, approximately 300 surveys were sent to local companies who participate in WPS-sponsored school-year internship and summer job programs; a total of 74 surveys were returned (24.7% response rate).[1] The students who participate in these programs, however, do not represent the entire student population of the WPS (63% of summer job program participants were eligible for free or reduced-priced lunch compared to approximately 54% of the total student population). Similarly, the employers who participate in these programs do not represent all employers in the area. Therefore, caution should be used when generalizing the data to all students and employers in Worcester. (The full results of the survey are provided in the Data Appendix.)

Employers were asked the relative importance of various skills for success in their companies. Employers were subsequently asked how well WPS students and graduates perform in those areas. All employers said that work behavior/attitude and interpersonal skills and teamwork were "critical" or "important" for success. Similarly, 96% reported that oral communication skills were critical or important for success, and 94% said that reading skills were important for success (see **Table 5-1**). **35% of employers said that WPS students are "exceptional" or "above average" in the area of work behavior/attitude, 38% in interpersonal skills and teamwork, 28% in oral communication skills, and 35% in reading skills.**

Overall, **76% of respondents said that they are satisfied with the abilities of currently enrolled WPS students and 74% said that they are satisfied with the abilities of WPS graduates.**

[1] For a sample size of 74, there is an approximate margin of error of +/-11.6 percentage points. Therefore, these survey results cannot be generalized and only reflect the perspective of the employers who returned the survey.

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What does this mean for Worcester?

In general, the employers that were surveyed report being satisfied with the students and graduates of the WPS. There are four primary skill areas that employers report as being the most critical for success: work behavior/attitude, interpersonal skills and teamwork, oral communication, and reading. Approximately one-third of employers said that WPS students are "exceptional" or "above average" in these categories. In the category of work behavior/attitude, however, 16% of employers said that WPS students are below average. Future consideration should be given to understanding what employers mean by "work behavior/attitude" and what, if anything, the schools can do to improve this rating.

In general, less than 10% of employers reported that WPS students are "below average" in the various skill areas, with the exception of written communication (19%), problem solving (17%), work behavior/attitude (16% as noted above), and technical skills (10%). Attention should be given to how the WPS can improve students' skills in these areas, and therefore reduce these percentages in the future.

Table 5-1: Skill Areas Required for Success and the Abilities of WPS Students

Skill Area	Percent responding "critical" or "important" for success	Percent responding that WPS students are "exceptional" or "above average"	Percent responding that WPS students are "below average"
Work behavior/attitude	100%	35%	16%
Interpersonal skills and teamwork	100%	38%	6%
Oral Communication	96%	28%	4%
Reading	94%	35%	6%
Problem Solving	82%	22%	17%
Customer Service	82%	23%	9%
Math/Calculation	78%	22%	8%
Written Communication	71%	21%	19%
Computer Technology	45%	25%	7%
Technical Skills	41%	20%	10%

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6 MCAS Scores

Why is it important?

The MCAS (Massachusetts Comprehensive Assessment System) was implemented following the Education Reform Act of 1993 and is designed to measure student performance based on the Massachusetts Curriculum Frameworks and learning standards. All students are tested annually in at least grades 4, 8, and 10. The tests thereby serve as one basis of accountability for students, districts, and schools. Starting with the class of 2003, all students are required to score at least 220 (out of 280) on the MCAS test in English language arts and mathematics in order to graduate.

Teachers, schools and districts use MCAS results to target programs and schools for improvements, to diagnose student strengths and weaknesses, and to offer tutoring services to students. The Massachusetts Department of Education (DOE) also uses the results to determine both high-performing schools and to target those that require DOE oversight to ensure the implementation of improvement plans and monitoring of results.

How does Worcester perform?

In 2001, **66% of tenth-graders in Worcester passed the English language arts MCAS exam and 59% passed the mathematics exam.** As shown in **Chart 6-1**, Worcester has seen strong improvement in the percent of tenth-grade students passing the math test. In English, however, the percent of students passing the test dropped between 1998 to 2000 to 49%, and rebounded to only just above the 1998 level in 2001.

As shown in **Chart 6-2**, the improvement in the percent of eighth-graders passing the English and math exams has been less variable. This year, **80% of students passed the English exam (up from 75% in 1998) and just 45% passed the math exam (up from 38% in 1998).**

In the fourth grade, there has been less improvement over the last several years on the math test than in the eighth or the tenth grade. This year, as shown in **Chart 6-3, the percent of students passing the math exam has fallen to 71% from 75% in 1998.** In English, however, the percent of fourth-graders passing the test has fluctuated, with 81% passing this year.

When passing rates for the various MCAS tests are disaggregated by race or ethnicity, it becomes clear that African-American and Hispanic students perform significantly below their white counterparts in Worcester and statewide. African-American and Hispanic students comprise a significant portion of the population of the WPS; African-American students represented 10.3% of the school population in '00-'01 and Hispanic students represented 27.9%. As shown in **Chart 6-4 (page 15)**, 75% of white students passed the 10th grade English MCAS exam, whereas only 61% of African-American and 44% of Hispanic students did. There were similar results on the math exam. As shown in **Chart 6-5 (page 15)** 67% of white students passed, whereas only 45% of African-American and 41% of Hispanic students passed.

Districts comparable to Worcester all scored below the statewide average in 2001 in both English and math, as shown in **Chart 6-6 and 6-7 (page 15)**. Lowell, however, scored higher than the comparable districts in both English and math. The statewide average for the 10th grade ELA MCAS exam was 82%; 73% passed in Lowell, 67% in Fall River, 66% in Worcester, and 50% in Springfield. The statewide average for the 10th grade math MCAS exam was 75%; 67% passed in Lowell, 59% in Fall River and Worcester, and 35% in Springfield.

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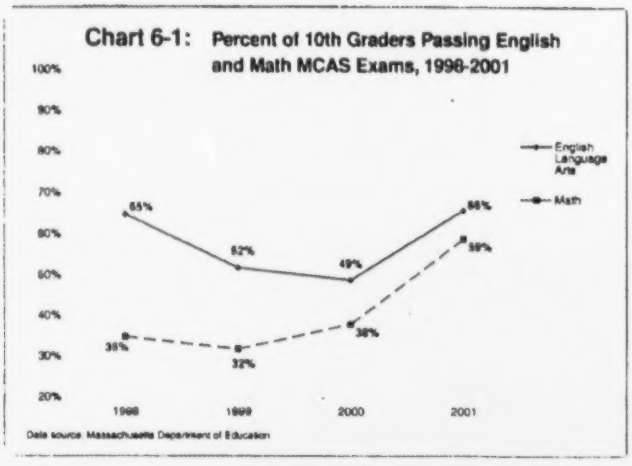

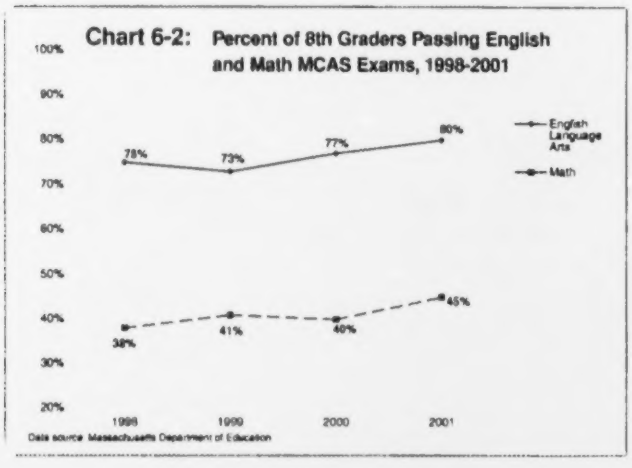

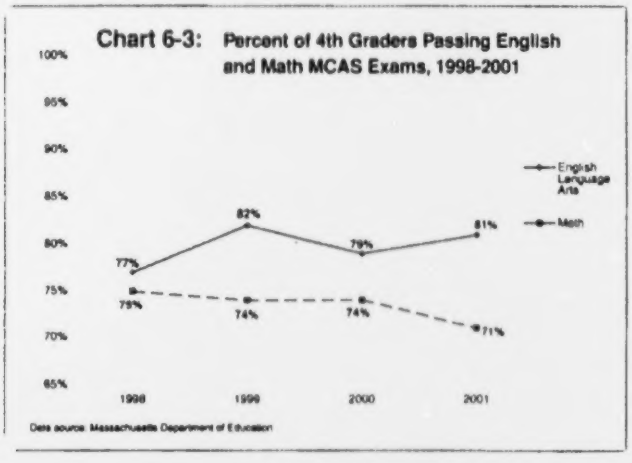

What does this mean for Worcester?

There are still a significant number of students who are not passing the English language arts and math MCAS exams in Worcester. Although tenth-graders will have four more opportunities to take the test in the eleventh and twelfth grades in order to pass, the goal should be for a greater percentage to pass on the first try. Results at the University Park Campus School (U.P.C.S.), where 76% of its students are eligible for free and reduced lunch, demonstrate that Worcester's student population can excel; 100% of U.P.C.S. tenth-graders passed both the English and Math exams (shown in the Data Appendix). Results are similar in the eighth grade; 100% of students passed the English exam and 75% passed the math exam. In fact, at the U.P.C.S., not only were passing rates well above Worcester's average, but a higher percentage of students scored at the two highest rankings: advanced and proficient. On the tenth-grade English exam, 24% scored advanced and 41% scored proficient at the U.P.C.S. In math, 40% scored advanced and 47% scored proficient. These achievements may demonstrate that the U.P.C.S. could be considered a "best practice" within the public school system. To replicate it, the Worcester Public Schools were recently awarded an $8 million grant from the Carnegie Corporation to restructure its large high schools into smaller units. Monitoring of MCAS scores during and after the implementation of this restructuring will show whether other schools can achieve results similar to those at the U.P.C.S.

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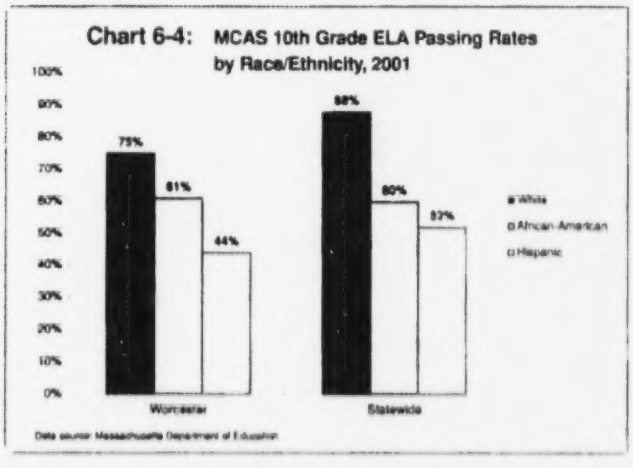
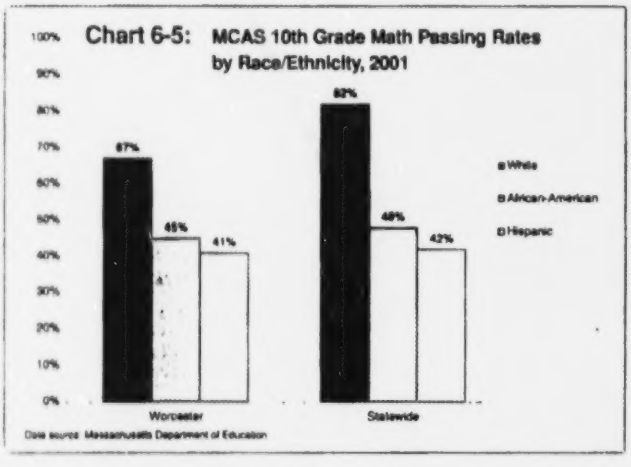
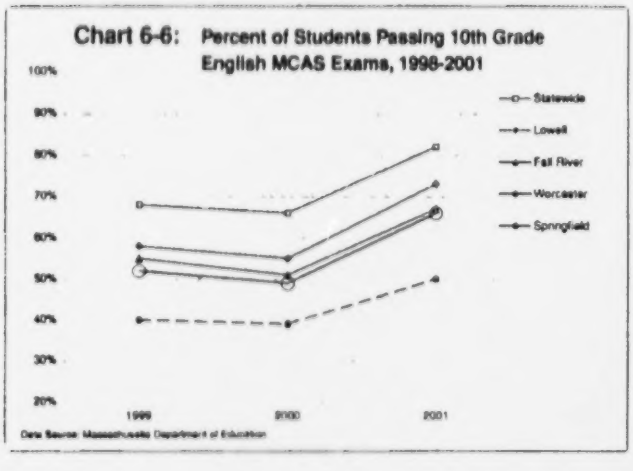
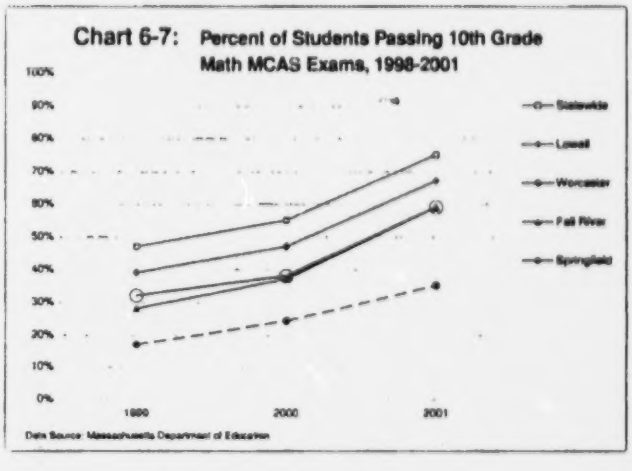
What does this mean for Worcester? (continued)

A large majority of students in Worcester who did not pass the 10th grade exams have scores that are very close to passing. 57% of students who took the English exam and 59% who took the math exam scored between 216 and 218. (A score of 220 is required to pass.) These students are likely to pass on one of four opportunities they will have to retake the test. It will be important for the district to provide intensive remediation both during regular classes and after school and during summers for those students who scored below 216 so that they pass these tests by the time of graduation.









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District Profiles

City or Town	2000 Total Enrollment	Number of Schools	% Limited English Proficiency	% Eligible for Reduced-Price Lunch	1999 Per-pupil expenditures	Comparison Score[2]
Worcester	**25,518**	**50**	**5.9%**	**54%**	**$6,888**	**N/A**
Fall River	12,180	36	3.6%	48%	$6,954	15
Lowell	**16,275**	**29**	**15.9%**	**52%**	**$6,966**	**16**
Springfield	25,918	51	10.8%	72%	$6,779	19
Other Massachusetts Cities						
New Bedford	14,490	28	4.6%	56%	$6,338	21
Lynn	15,069	30	16.4%	47%	$6,626	22
Brockton	16,869	25	7.5%	38%	$6,597	23
Chicopee	7,916	16	4.6%	37%	$6,552	33
Cambridge	7,294	16	8.2%	39%	$11,272	41
Fitchburg	5,987	10	10.5%	45%	$6,004	41
Lawrence	12,562	23	26.1%	77%	$6,580	41
Holyoke	7,562	15	24.6%	66%	$8,454	45
Somerville	6,355	13	16.4%	69%	$7,868	45
Chelsea	5,658	9	19.5%	83%	$6,661	48
Boston	62,950	131	20.4%	72%	$8,487	58

The comparison districts of Springfield, Lowell, and Fall River were selected using an analytic method based on the following criteria[1]: 2000 total enrollment, total number of schools, percent of students of limited English proficiency, percent of students eligible for free or reduced lunches, and 1999 per pupil expenditures for all day programs. The table above shows the relevant criteria for those districts from which Fall River, Lowell, and Springfield were chosen.

[1] All data is from the Massachusetts Department of Education. Full profiles for all school districts are available at http://profiles.doe.mass.edu.
[2] The comparison score was calculated by the Worcester Regional Research Bureau. The lower the comparison score, the more similar that district is to Worcester on the selected criteria. Any town or city with a score below 20 was used as a comparison district.

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Data Appendix

Data source:
Worcester Public Schools

	Attendance Rates		Mobility Rates		4th Grade English MCAS Passing Rates		4th Grade Math MCAS Passing Rates	
	1999-2000	2000-2001	1997-1998	1998-1999	1999-2000	2000-2001	1999-2000	2000-2001
District Average	92.6%	93.1%	36.0%	31.1%	79%	81%	74%	71%
Accelerated Learning Lab	92.3%	93.7%	42.8%	35.8%	59%	56%	60%	46%
Adams Street	93.7%	94.3%	52.0%	38.2%	90%	100%	73%	94%
Belmont Street Community	94.7%	95.1%	52.7%	57.5%	60%	89%	68%	74%
Burncoat High	89.0%	91.4%	28.1%	25.0%	-	-	-	-
Burncoat Middle	93.5%	93.5%	35.3%	30.4%	-	-	-	-
Burncoat Street Preparatory	94.8%	94.5%	40.9%	26.8%	88%	67%	95%	33%
Canterbury Street Magnet	95.0%	94.8%	33.1%	43.4%	95%	100%	89%	97%
Chandler Elementary	93.8%	94.0%	69.8%	74.1%	46%	76%	69%	40%
Chandler Magnet	93.8%	93.9%	45.0%	39.4%	54%	75%	47%	72%
City View	94.7%	94.6%	35.4%	29.3%	86%	62%	75%	55%
Clark Street	95.5%	96.1%	21.9%	23.0%	89%	100%	91%	92%
Columbus Park	94.5%	94.9%	43.8%	30.6%	73%	85%	69%	81%
Doherty Memorial High	90.9%	91.3%	29.0%	18.8%	-	-	-	-
Elm Park	93.9%	94.9%	56.5%	49.9%	33%	37%	38%	26%
Flagg Street	96.0%	95.9%	26.5%	21.1%	99%	89%	88%	86%
Forest Grove Middle	94.3%	93.6%	22.6%	23.4%	-	-	-	-
Gates Lane	95.0%	95.1%	30.2%	24.7%	86%	80%	79%	68%
Goddard	94.3%	94.9%	47.6%	35.2%	70%	72%	62%	58%
Grafton Street	94.7%	94.8%	50.9%	36.3%	95%	98%	93%	98%
Granite Street	94.7%	95.1%	42.9%	42.4%	83%	72%	83%	67%
Greendale	94.3%	94.3%	24.8%	27.8%	79%	39%	64%	39%
Harlow Magnet	93.2%	93.4%	44.5%	38.2%	59%	69%	38%	65%
Heard Street	96.2%	95.9%	33.3%	39.9%	87%	97%	93%	95%
Jacob Hiatt Magnet	95.9%	96.3%	23.3%	16.3%	91%	91%	92%	89%
Lake View	94.6%	95.6%	31.6%	35.1%	86%	87%	84%	83%
Lincoln Street	94.2%	93.9%	53.5%	46.7%	66%	76%	66%	81%
May Street	96.0%	96.4%	36.8%	30.6%	89%	72%	80%	59%
McGrath Elementary	95.0%	95.9%	35.6%	30.5%	79%	90%	74%	57%
Midland Street	95.5%	96.7%	30.2%	32.9%	70%	95%	64%	85%
Mill-Swan Magnet	93.7%	94.2%	22.1%	24.6%	70%	58%	48%	55%
Multiple Intell. (Dartmouth)	95.5%	95.3%	29.6%	24.1%	84%	77%	82%	61%
Nelson Place	96.0%	95.8%	19.2%	23.3%	92%	91%	83%	93%
New Ludlow	96.3%	96.6%	27.4%	18.3%	81%	97%	74%	79%
Norrback Avenue	94.2%	95.1%	28.6%	25.4%	83%	89%	86%	69%
North High	87.5%	89.6%	43.9%	36.5%	-	-	-	-
Quinsigamond	95.0%	95.1%	50.3%	40.1%	82%	90%	73%	83%
Rice Square	95.6%	95.9%	27.8%	23.3%	71%	87%	64%	60%
Roosevelt	94.3%	94.9%	37.5%	25.6%	83%	88%	76%	83%
South High Community	88.7%	89.5%	35.5%	30.1%	-	-	-	-
Sullivan Middle	92.5%	92.1%	31.4%	26.5%	-	-	-	-
Tatnuck Magnet	95.5%	95.7%	20.9%	19.8%	96%	89%	93%	87%
Thorndyke Road	95.0%	95.7%	21.2%	23.3%	81%	95%	74%	98%
Union Hill	93.6%	93.4%	67.3%	44.8%	49%	59%	45%	61%
University Park Campus	96.4%	96.6%	0.4%	0.5%	-	-	-	-
Vernon Hill	94.1%	94.1%	47.0%	47.6%	80%	88%	72%	76%
Wawecus Road	95.7%	95.7%	27.1%	21.5%	92%	91%	92%	91%
West Tatnuck	94.7%	94.3%	21.7%	26.1%	92%	81%	83%	61%
Worcester Arts Magnet	95.1%	95.2%	35.7%	30.1%	93%	98%	91%	83%
Worcester East Middle	92.7%	92.9%	47.2%	30.8%	-	-	-	-
Worcester Vocational High	91.1%	91.0%	-	7.8%	-	-	-	-

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MCAS Passing Rates

	8th Grade English		8th Grade Math		10th Grade English		10th Grade Math	
	1999-2000	2000-2001	1999-2000	2000-2001	1999-2000	2000-2001	1999-2000	2000-2001
District Average	77%	80%	40%	45%	49%	66%	38%	59%
Accelerated Learning Lab	64%	87%	37%	55%	64%	71%	38%	65%
Burncoat High	-	-	-	-	48%	65%	38%	55%
Burncoat Middle	76%	78%	43%	40%	-	-	-	-
Doherty High	97%	100%	81%	80%	58%	70%	45%	67%
Forest Grove Middle	77%	83%	39%	52%	-	-	-	-
North High	-	-	-	-	48%	73%	33%	63%
South High	-	-	-	-	63%	62%	52%	54%
Sullivan Middle	77%	70%	36%	38%	-	-	-	-
University Park Campus	100%	100%	91%	75%	-	100%	-	100%
Vocational High	-	-	-	-	24%	49%	15%	45%

Post-Graduate Placement Rates

	2-year Placement 2000	4-year Placement 2000	Total Placement Rate 2000	2-year Placement 2001	4-year Placement 2001	Total Placement Rate 2001
District	25.2%	43.6%	71.9%	33.9%	37.9%	74.5%
District - Not including Voke	27.1%	48.9%	79.4%	34.7%	43.3%	80.7%
Accelerated Learning Lab	25.0%	45.0%	70.0%	29.2%	33.3%	62.5%
Burncoat High	27.2%	48.5%	80.4%	40.2%	37.0%	81.0%
Doherty High	17.3%	64.1%	83.5%	29.2%	56.7%	86.9%
North High	41.0%	34.7%	77.1%	41.6%	30.3%	74.6%
South High	29.2%	42.3%	76.4%	32.9%	41.9%	79.1%
Voke School	13.5%	10.8%	26.3%	29.7%	9.9%	42.3%

Data Source: Worcester Public Schools

Trends in Attendance Rates

	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
District	92.7%	92.9%	93.4%	93.6%	92.6%	93.1%
High Schools	87.9%	88.2%	89.3%	90.0%	89.0%	90.5%
Middle Schools	90.8%	91.2%	92.3%	92.6%	93.3%	93.1%
Elementary Schools	94.4%	94.6%	94.8%	95.0%	94.8%	95.1%

Dropout Rates

	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
District	7.4%	6.8%	5.9%	7.3%	6.1%	6.2%
Accelerated Learning Lab	-	3.3%	1.9%	2.8%	5.1%	5.7%
Burncoat	9.0%	9.9%	7.3%	9.7%	6.9%	7.7%
Doherty	2.4%	5.3%	4.2%	5.9%	5.4%	4.8%
North	12.7%	9.8%	7.3%	8.6%	7.4%	9.1%
South	7.8%	3.5%	5.9%	8.5%	5.9%	5.2%
Vocational	-	-	-	4.3%	5.3%	4.9%

Data source: Worcester Public Schools

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Data Appendix

Full Results-Principal Survey of Family Involvement

How often does your school involve families in the following activities?

	ALL PRINCIPALS				ELEMENTARY SCHOOL				MIDDLE SCHOOL				HIGH SCHOOL			
	Never	Rarely	Sometimes	Often	Never	Rarely	Sometimes	Often	Never	Rarely	Sometimes	Often	Never	Rarely	Sometimes	Often
Volunteer in library, lunchroom or other	17%	19%	27%	37%	8%	16%	24%	51%	40%	0%	60%	0%	40%	20%	40%	0%
Help with fundraising activities	6%	12%	27%	56%	3%	8%	19%	70%	0%	20%	60%	20%	20%	40%	40%	0%
Plan or organize special events	2%	15%	39%	44%	0%	8%	35%	57%	0%	40%	40%	20%	0%	60%	40%	0%
Tutor students	35%	33%	23%	10%	32%	22%	32%	14%	20%	80%	0%	0%	60%	40%	0%	0%
Extracurricular activities	12%	33%	39%	17%	11%	30%	41%	19%	0%	40%	60%	0%	20%	40%	40%	0%
Help with innovations and new programs	14%	37%	35%	15%	11%	32%	38%	19%	20%	20%	60%	0%	20%	60%	20%	0%
Help with school workshops	17%	86%	39%	19%	14%	19%	41%	27%	20%	40%	40%	0%	40%	40%	20%	0%

About what percentage of families in your school are involved in this per year?

	0-10%	10-25%	25-50%	50-75%	75-100%	0-10%	10-25%	25-50%	50-75%	75-100%	0-10%	10-25%	25-50%	50-75%	75-100%	0-10%	10-25%	25-50%	50-75%	75-100%
Volunteer in library, lunchroom or other	40%	0%	18%	8%	6%	29%	31%	20%	11%	9%	60%	20%	20%	0%	0%	60%	20%	20%	0%	0%
Help with fundraising activities	20%	26%	18%	28%	10%	17%	19%	17%	33%	14%	20%	40%	20%	20%	0%	40%	60%	0%	0%	0%
Plan or organize special events	20%	29%	28%	20%	4%	17%	22%	31%	25%	6%	40%	20%	40%	0%	0%	20%	80%	0%	0%	0%
Tutor students	63%	24%	8%	4%	2%	28%	22%	11%	6%	3%	60%	40%	0%	0%	0%	60%	40%	0%	0%	0%
Extracurricular activities	34%	38%	20%	6%	2%	11%	30%	41%	16%	3%	60%	0%	40%	0%	0%	40%	40%	20%	0%	0%
Help with innovations and new programs	38%	29%	23%	3%	8%	11%	32%	38%	16%	3%	40%	40%	20%	0%	0%	40%	40%	20%	0%	0%
Help with school workshops	30%	36%	20%	10%	4%	14%	19%	41%	22%	5%	40%	40%	20%	0%	0%	60%	40%	0%	0%	0%

Which of the following ways does this school provide information to families?

Times per year we	Never	1-2	3-5	5+	Never	1-2	3-5	5+	Never	1-2	3-5	5+	Never	1-2	3-5	5+
Open House	0%	71%	24%	6%	0%	65%	27%	8%	0%	100%	0%	0%	0%	80%	20%	0%
Family information meetings	4%	31%	33%	31%	3%	30%	41%	27%	20%	40%	20%	20%	0%	40%	20%	40%
Newsletters from the principal	0%	2%	2%	96%	0%	0%	0%	100%	0%	20%	20%	60%	0%	0%	0%	100%
Calendar of events	0%	0%	2%	98%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	25%	75%
Advance notice of special deadlines	0%	4%	6%	90%	0%	3%	3%	95%	0%	0%	20%	80%	0%	20%	20%	60%
Interim academic reports	0%	0%	65%	35%	0%	0%	70%	30%	0%	0%	80%	20%	0%	0%	60%	40%
Handbook on school rules/programs	6%	86%	4%	4%	8%	81%	5%	5%	0%	100%	0%	0%	0%	100%	0%	0%
Notice of upcoming tests	0%	24%	37%	39%	0%	22%	32%	46%	0%	20%	60%	20%	0%	20%	60%	20%
Directory of family addresses/phone num	84%	4%	2%	10%	83%	6%	3%	8%	100%	0%	0%	0%	100%	0%	0%	0%
Newspaper written by students	18%	31%	22%	29%	22%	41%	24%	14%	0%	20%	20%	60%	20%	0%	20%	60%
Family bulletin boards	18%	24%	6%	52%	8%	22%	8%	61%	80%	20%	0%	0%	40%	40%	0%	20%
Webpage/Internet/email	4%	14%	8%	75%	5%	11%	5%	78%	0%	20%	20%	60%	0%	20%	20%	60%

How many hours each week, on average, do you spend in contact with families?

<1	1 to 2	3 to 5	5 to 7	7+	<1	1 to 2	3 to 5	5 to 7	7+	<1	1 to 2	3 to 5	5 to 7	7+	<1	1 to 2	3 to 5	5 to 7	7+
2%	5%	16%	20%	57%	0%	6%	13%	19%	63%	0%	0%	50%	50%	0%	0%	0%	25%	25%	50%

Type of School	Number	Percent
Elementary	37	79%
Middle	5	11%
High	5	11%

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Full Results-Teacher Survey of Family Involvement

(Number of teachers surveyed = 241)

	7-8	9-12				No Response
Grade Level	44.8%	54.8%				0.4%

How many hours each week, on average, do you spend contacting families?

	0	<1	1	2	3+	No Response
	27.3%	42.9%	13.4%	7.6%	5.5%	4.6%

How many different parent volunteers assist you in a typical week?

	0	1-2	3-6	5-7	7+	No Response
	85.5%	6.3%	2.5%	0.4%	1.7%	3.8%

Please estimate how often you contact your students' families in these ways each year

	Never	1-2	3-4	5+	No Response
Send home a letter or note	12%	28%	26%	34%	2%
Assign homework that requires interaction with family	19%	32%	20%	29%	2%
Send out request for volunteers	62%	21%	9%	6%	2%
Survey families for ideas	58%	23%	7%	11%	1%
Request help for fundraising activities	67%	19%	8%	6%	3%

Estimate the percent of your students' families that you contact in a typical year in these ways:

	0-10%	11-25%	26-50%	51-75%	75-100%	No response
Telephone call to family	38.2%	24.1%	16.6%	7.1%	10.0%	4.1%
Talk informally at school, before school, or after school	32.0%	32.4%	15.4%	10.4%	7.5%	2.5%
Ask families to check daily that child's homework is done	36.5%	23.7%	15.8%	10.4%	9.5%	4.1%
Provide schoolwork that parents can practice in the summer	69.3%	11.6%	7.5%	4.6%	3.7%	3.3%
Discuss with families how you teach reading and math in the classroom	55.2%	20.7%	10.8%	5.4%	2.9%	5.0%
Discuss with families how to help with or monitor homework	40.7%	21.2%	14.9%	10.0%	9.1%	4.1%
Ask families to quiz children before a spelling or other test	55.6%	18.3%	8.7%	5.0%	7.1%	5.4%
Contact families about their children's problems or failures	19.5%	22.0%	21.2%	16.6%	14.9%	5.8%
Inform families when their children do something well or improve	24.5%	27.0%	18.3%	12.9%	13.3%	4.1%
Inform families of the skills their children must pass in each subject I teach	29.9%	18.7%	17.8%	13.7%	15.8%	4.1%
Provide specific activities for children and families to do to improve students' grades	39.8%	19.9%	17.8%	10.8%	7.9%	3.7%
Suggest ways to practice spelling or other skills at home before a test	44.0%	17.0%	16.6%	7.1%	10.8%	4.6%
Inform families about what topics are currently being covered in the classroom	25.3%	20.3%	15.4%	15.4%	18.7%	5.0%
Establish a formal agreement where the parent supervises and assists the child in completing homework tasks	53.9%	19.9%	11.2%	5.0%	5.8%	4.1%
Establish a formal agreement where the parent provides rewards and/or penalties based on the child's school performance or behavior	64.3%	14.9%	7.1%	4.6%	4.6%	4.6%
Ask families to listen to their children read	68.0%	9.5%	6.2%	6.6%	5.0%	4.6%
Ask families to check and sign homework/folders	47.3%	17.4%	14.9%	4.6%	11.2%	4.6%
Ask families to check and sign report cards or written feedback on school performance	28.2%	10.0%	12.9%	11.6%	32.8%	4.6%
Ask families to take their child to the library	87.2%	9.5%	9.1%	4.1%	6.6%	3.3%
Ask families to read to their children regularly	70.1%	8.3%	7.5%	4.6%	5.0%	4.6%
Ask families to get their child to talk about what they did that day in your classroom	53.9%	12.9%	13.7%	7.1%	8.7%	3.7%
Give a questionnaire to families so they can evaluate their child's progress, or provide some other feedback to you	73.4%	9.5%	5.4%	3.7%	2.5%	5.4%

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Data Appendix

Full Results-Employer Satisfaction Survey

For a new employee to be successful in your organization, how important are each of the following skills?

	Critical	Important	Less important	Not required	Don't know
Math/Calculation	25%	53%	16%	6%	0%
Reading	68%	26%	6%	0%	0%
Written communication	30%	41%	22%	7%	0%
Oral communication	60%	36%	4%	0%	0%
Computer technology	18%	27%	30%	24%	1%
Technical skills	18%	23%	40%	19%	0%
Problem solving	31%	51%	16%	3%	0%
Customer service	60%	22%	10%	8%	0%
Work behavior/attitude	89%	11%	0%	0%	0%
Interpersonal skills and teamwork	76%	24%	0%	0%	0%

How would you rank students from the Worcester Public Schools who have worked for you in the past two years in each of the following skill areas?

	Exceptional	Above average	Average	Below Average	No basis for judgement
Math/Calculation	7%	15%	56%	8%	14%
Reading	10%	25%	58%	6%	3%
Written communication	7%	14%	47%	19%	14%
Oral communication	7%	21%	65%	4%	3%
Computer technology	8%	17%	32%	7%	36%
Technical skills	9%	11%	51%	10%	20%
Problem solving	8%	13%	52%	17%	10%
Customer service	9%	14%	53%	9%	16%
Work behavior/attitude	17%	18%	48%	16%	1%
Interpersonal skills and teamwork	10%	28%	55%	6%	1%

Considering all Worcester Public Schools students you've supervised in the last two years, please answer the following questions:

	Strongly agree	Agree	Disagree	Strongly Disagree	Don't know/ No basis for judgement
On average, I am satisfied with the abilities of WPS students	16%	60%	21%	0%	3%
On average, WPS students perform as well as students from other districts	17%	38%	23%	3%	20%
I am as likely to hire a WPS student as one from another district	23%	48%	11%	4%	14%

Considering all Worcester Public Schools graduates you've supervised in the last two years, please answer the following questions:

	Strongly agree	Agree	Disagree	Strongly Disagree	Don't know/ No basis for judgement
On average, I am satisfied with the abilities of WPS graduates	12%	62%	14%	1%	11%
On average, WPS graduates perform as well as graduates from other districts	13%	49%	14%	3%	22%
I am as likely to hire a WPS graduate as one from another district	25%	47%	10%	4%	15%

Primary business of the organization

Business services	15%
Education	6%
Health Care	19%
Financial Services	4%
Government/public service	8%
Legal services	0%
Manufacturing	6%
Retail food service	14%
Other nonprofit	6%
Other	21%

Number of Employees

> 200	13%
150-200	8%
100-150	14%
50-100	21%
< 50	44%

In the next five years, will your need for employees entering as high school graduates increase significantly?

Strongly Agree	13%
Agree	42%
Disagree	18%
Strongly disagree	7%
Don't know	20%

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CCPM Advisory Committee

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	Debra M. Lockwood	Green Island/Vernon Hill CDC
	Dominick Marcigliano	Worcester East Side CDC
	J. Stephen Teasdale	Main South CDC
	Michael F. Whalen	Worcester Common Ground
Neighborhood Business Associations	**Lawrence Abramoff**	Tatnuck Booksellers
	Robbin Ahlquist	Sole Proprietor and Highland Street Business Association
	John W. Braley III	Braley and Wellington Insurance and North Worcester Business Association
	Charlie Grigaitis	Uncle Charlie's Tavern and Grafton Hill Business Association
	Chistos Liazos	Webster House Restaurant and Webster Square Business Association
	Rick Spokis	International Muffler and Brake and Madison North Business Association
Neighborhood Associations	**Marge Begiri**	Quinsigamond Village
	James Connolly	Elm Park Prep+
	Ann Flynn	Crown Hill
	Sally Jablonski-Ruksnaitis	Quinsigamond Village
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MISSION STATEMENT

The Worcester Regional Research Bureau is a private, non-profit organization dedicated to conducting independent, non-partisan research on financial, administrative, management and community issues facing Worcester's municipal government and the surrounding region.

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